

## Pegs

### Measuring inflation

- price level
- growth rate
- data

### Costs of inflation

- uncertainty
- signal extraction
- menu costs
- money illusion

### Cause of inflation

### Shortcomings of the CPI



## Measuring inflation

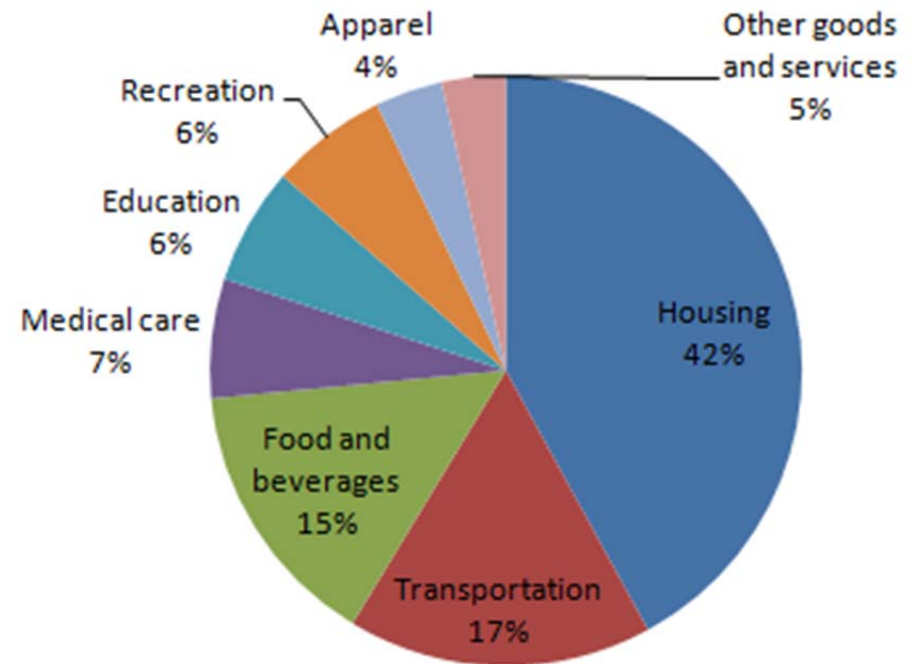
1. Start with a general price level estimate.

- Weighted-average of relevant prices

### Consumer Price Index (CPI)

The measure of the price level based on the consumption patterns of a typical consumer.

CPI major category weights



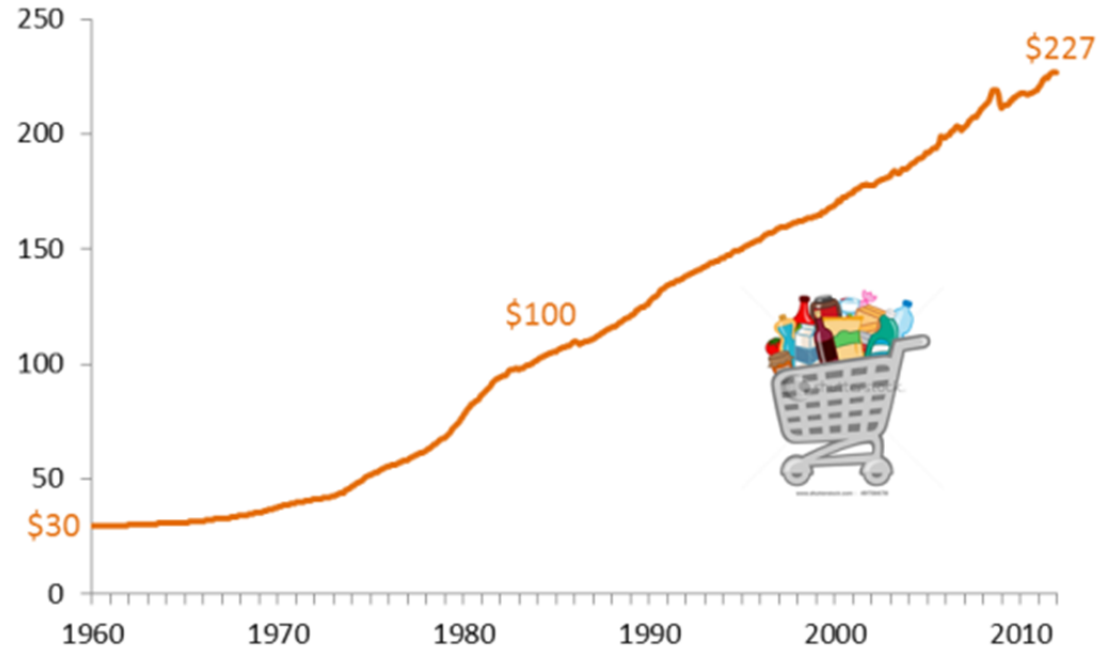
Source: BLS

# Measuring inflation

2. Calculate growth rate.

$$i_{2011} = \left( \frac{P_{2011} - P_{2010}}{P_{2010}} \right) \times 100$$

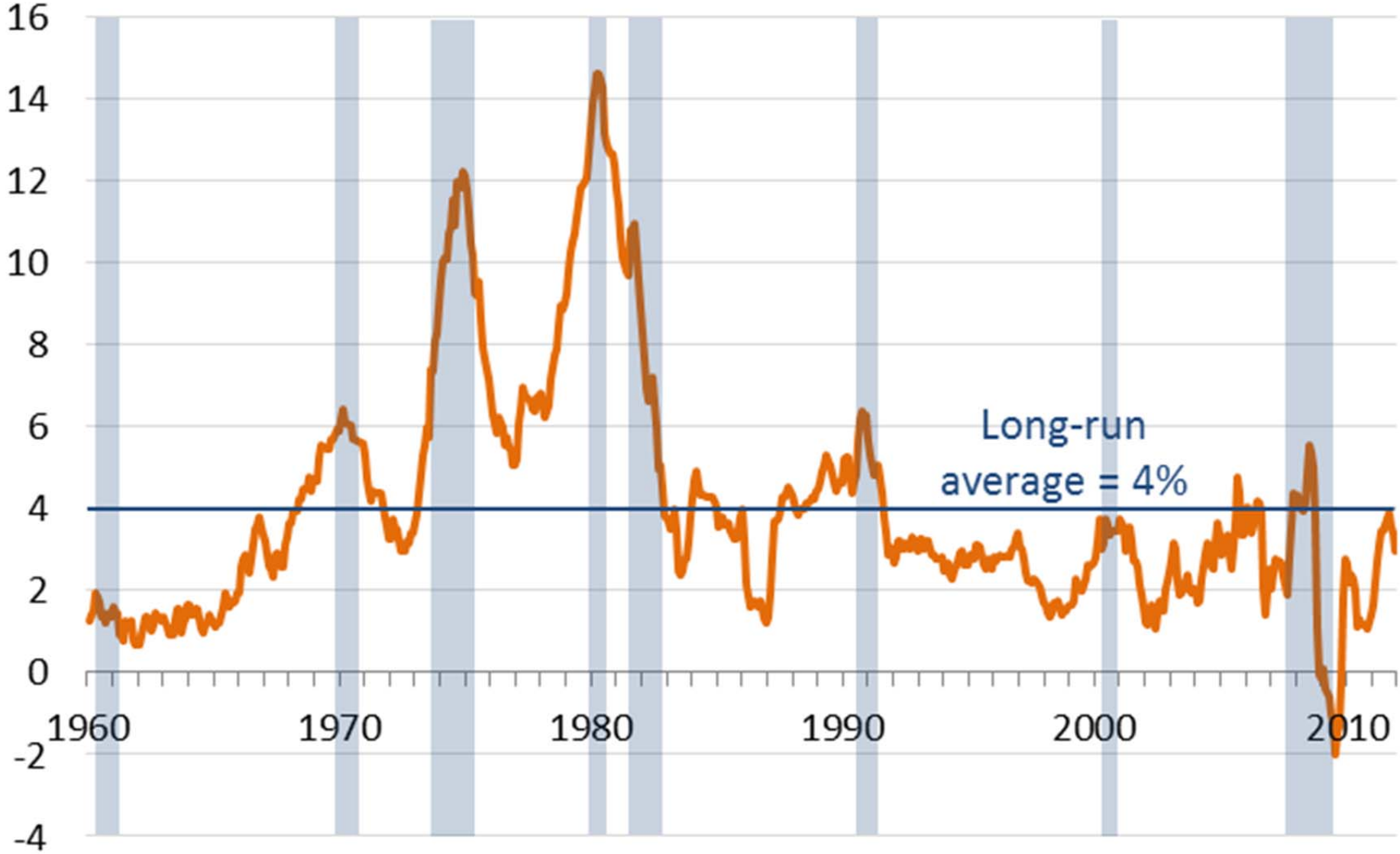
Price of a typical consumer's basket of goods



Source: BLS.

# U.S. inflation rates, 1960-2012

(12-month average CPI growth)



Not all prices rise...



### HP-35

World's first pocket electronic calculator.

Introduced January 1972

Price was \$395

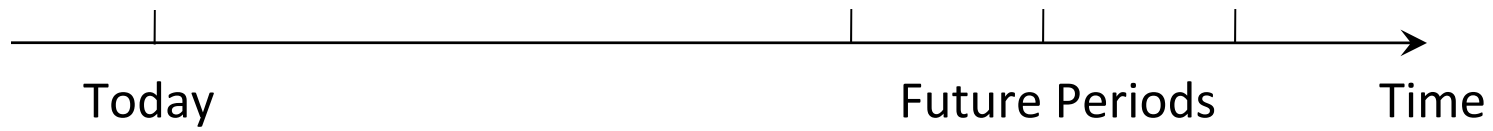
Sold over 100,000 in first year.



## Problems with inflation

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### 1. Future price level uncertainty



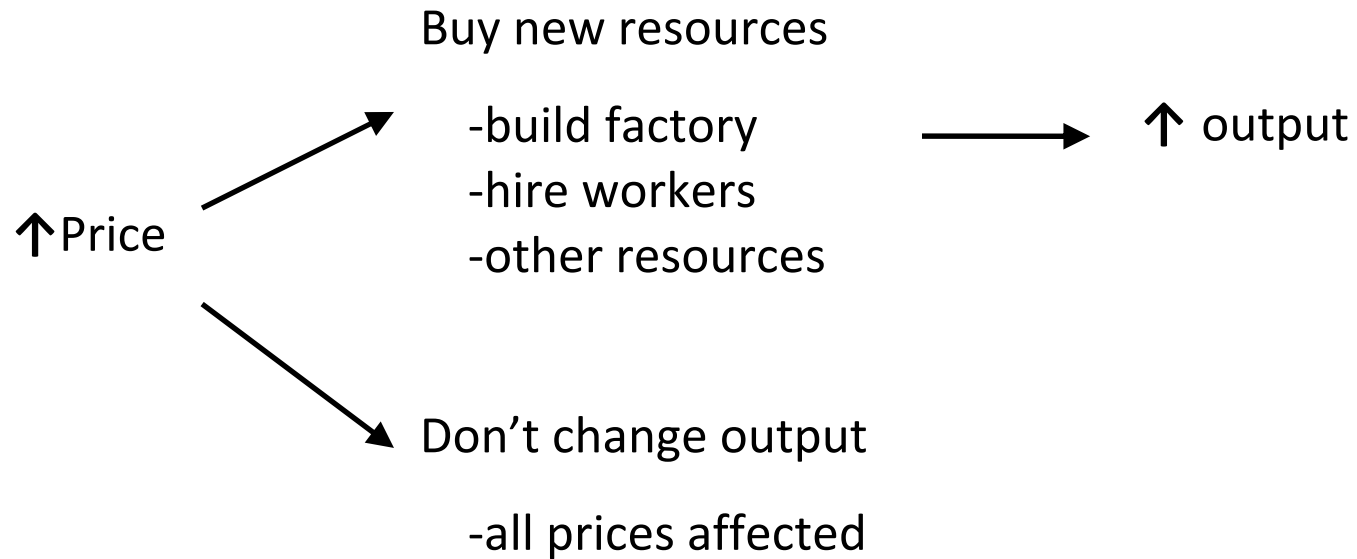
**\*result:** long-term contracts riskier and less attractive.

## Problems with inflation

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### 2. Signal extraction problem:

Difficult for suppliers to discern the source of price increases.



**\*result:** misallocation of resources can lead to big problems.

## Problems with inflation

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### 3. Menu costs

-Physical

-Psychological

**\*result:** some prices don't adjust.

## Problems with inflation

### 4. Money illusion

**Nominal Wage:** Wage expressed in current dollars.

**Real Wage:** Wage adjusted for price level changes.

**Money Illusion:** People interpret nominal changes as real changes.

**\*result:** some prices don't adjust.

### Cost of living – selected cities

NY (Manhattan), NY	214.3
San Francisco, CA	169.5
Los Angeles, CA	145.4
Washington, DC	137.2
Boston, MA	135.4
Philadelphia, PA	124.1
Seattle, WA	121.5
Chicago, IL	110.8
Richmond, VA	106.9
Phoenix, AZ	101.0
Albuquerque, NM	98.7
Detroit, MI	98.6
Atlanta, GA	96.5
Dallas, TX	91.5
Charlotte, NC	90.0

Source: <http://www.infoplease.com/business/economy/cost-living-index-us-cities.html>

## Cause of inflation

**Inflation (i):** A continual rise in the price level.



\*Inflation is a monetary phenomenon.

## Inflation and money growth 110 countries, 1960-1990

